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LAKE CARRIERS' ASSOCIATION.

To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers and improve the character of the service rendered to the public.

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MEETING OF THE FINANCE COMMITTEE OF THE LAKE CARRIERS' ASSOCIATION.

The regular semi-monthly meeting of the Lake Carriers' Association took place at the office of President M. A. Bradley, in Cleveland Monday. Several important features were brought to the notice of the committee, and it was decided to hold the annual meeting at Detroit, on January 12th. A communication from Commander Woodward was read, in which he said that there existed in Detroit River near Gibraltar, in the old channel of Maumee Bay, in an unused part of Niagara River, and in an abandoned channel of the St. Lawrence, a number of unnecessary buoys. He thought he could aid navigation better by discontinuing these buoys in their present positions, and placing them elsewhere next year. If the Lake Carriers' Association decided favorably he would endeavor to obtain authority to do this. Secretary Keep and Treasurer McKay were appointed a committee to look into the matter and report at the annual meeting. Captain James Corrigan, Harvey D. Goulder and Captain McKay were appointed a committee to examine the appropriation bills, and to select such aids to navigation as they deemed indispensable, that action might be taken later. An effort will be made to have a meeting of Chicago vessel owners before the annual meeting, with the view of securing a large delegation to Detroit. Suggestions are desired from the Chicago vessel men as to methods of improving the service of the shipping office in that city.

President M. A. Bradley reported that from what he had gathered at the meeting of underwriters and others at Detroit it was probable a proposition would be made for vessel owners to join in the movement for improved inspection. It is proposed to get up a Lloyd's Register with a new or at least considerably modified classification which would cost about $11,000.

The annual meeting is also expected to take up the question of coal shippers insisting on vessels taking their fuel at the same dock that gives them the cargo. At some ports this practice has grown into an abuse.

The president's annual address has now taken the form of a general report of the association, which will be published some days previous to the meeting and sent to all members, thus making it unnecessary to spend time in reading it at the meeting. According to the new constitution the president is not re-eligible for election, so a new president will have to be selected at the annual meeting.

BRAVERY REWARDED.

The collector of customs of Chicago has sent to the Treasury department his recommendation that Captain Martin Knudson, keeper of Pilot Island light, be awarded a second-class medal for bravery in saving the lives of the captain and crew of the schooner A. P. Nichols, which was wrecked at Death's Door, Green Bay, on Oct. 28.

VESSELS CLASSED.

The American Shipmasters' association have classed in the "Record of American and Foreign Shipping" the following tonnage during the past week: American three-masted schooners A. H. Howe and R. T. Rundlett, screw steamer Bluefields, half brig Caroline Gray, barks Lucy A. Nickels and Willard Mudgett, barkentine James W. Elwell and British barks Barbadian and Europa.

MARINE APPLIANCES JUST PATENTED.

Special Correspondence to The Marine Record.

WASHINGTON, D. C.—Boiler, W. B. Mack, Boston, Mass.

Boiler cleaner, G. E. Truax, Denver, Col.

Boiler feeder, C. E. Van Auken, Chicago, Ills.

Steam boiler indicator, G. L. McDermott, Neenah, Wis.

Compass, P. J. Kaiser, Noordeine, Netherlands.

A NATIONAL NAVAL RESERVE.

Commissioner O'Brien of the navigation bureau has made a special report to the Secretary of the Treasury in regard to the shipping interests of the United States, in the course of which he advocates the organization of a national naval reserve. He said it should be local in character, with a fixed term of enlistment and recruited from shipwrights, naval architects, pilots, marine engineers and citizen seamen from along the Atlantic, Gulf and Pacific coasts and the Great Lakes, the entire organization to be under the jurisdiction of the Secretary of the Navy.

In the commissioner's opinion it should consist of four divisions, one for the lakes and one for each of the other coasts, and he suggests that the Government place at the disposal of each division a merchant steamer so constructed as to be as a war cruiser when needed, but otherwise to be used as a practice ship under the direction of the Secretary of the Navy.

ONWARD AND UPWARD.

The appeal of the Duluth Chamber of Commerce for Congressional action on the construction of a ship canal, running through United States territory, from the Great Lakes to the Hudson River, and thence to the sea, is put into plain words that are worthy of attention.

The freight passing through the Sault Ste. Marie Canal for this year has exceeded 11,000,000 tons, which is 2,000,000 more than the tonnage of any previous season, and just about double the average tonnage passing through the Suez Canal during the last ten years.

The saving in cost of transportation, directly by the tonnage on the lakes, and indirectly by the reduction of railway freights to avoid diversion of freight to lake routes, is estimated at $400,000,000 a year. "Who," says the appeal of the Duluth Chamber of Commerce, "dare estimate the annual saving to the people of the United States if the Great Lakes practically are made a part of the ocean, and if ocean steamers are enabled to sail from any lake port to any port of the world?"

LOSS OF THE STEAMER NORTHERNER.

Notwithstanding the report that the steamer Northerner owned by the Rochester Transportation Co., had arrived all well at Duluth, it is now learned that after jettisoning several hundred barrels of oil, off Keweenaw Point, Lake Superior, she reached L'Anse only to burn up at the dock on Monday morning last, and become a total loss.

The fire was caused by a deck hand dropping a lighted lamp in the hold, which ignited the cargo of oil shipped at Cleveland by the Standard Oil Co., consigned to Port Arthur, Ont. The loss on cargo is estimated at $10,000, and on the hull at $50,000.

The Northener was built by Hill, at Marine City, Mich., in 1876, and underwent a thorough rebuild in 1887, her capacity was 1,136 tons.

A HOME FOR AGED SEAMEN.

General Superintendent Frankland, of the Western Seamen's Friend Society, is the reputed owner of Credit island, near Rock island, on the Mississippi river, and he has responded to a call to found an institution designed to meet a need felt throughout our entire transportation service. It is a permanent home for aged, decrepit and disabled men who have been worn out or incapacitated in the employ of the commerce of the interior of our country, and who, having endured the hardships of a specially hazardous calling, need and deserve, as public servants, a home for their declining years. A memorial was acted upon at the recent annual meeting of the directors, which emanated from a body of nearly one hundred licensed officers in the Mississippi steamboat service. They point as an ideal to that noble institution for sailors in ocean service on Staten Island, in New York harbor, called the Sailors' Snug Harbor, which affords shelter to 800 old men. These men of western marine service conceived the thought that the body to champion their cause was the Western Seamen's Friend Society. They also suggested what appears to them an ideal site for such a home. This is Credit Island, which is situated in the Mississippi river, two miles below the United States Arsenal Island. The eastern Snug Harbor, on Staten island, N. Y., is built upon a tract of 140 acres, and has accommodations for 1,000 men, thirty buildings, and with an annual endowment of $400,000. Superintendent Frankland, in speaking of the new Snug Harbor, says: "Our hope will be to provide for needy men of all classes of transportation service. Brought to light in this Columbian year, when the world does homage to the Christian sailor, Columbus, it is proposed to give this home the cognomen of the Columbian Snug Harbor; for Columbus, after all his wondrous life of peril on the sea, spent his last days, as many another sailor has done, in obsurity and penury.

"Our endeavor will be to raise during the coming year for this object the sum of $50,000; afterwards to add buildings and endowments until an institution commensurate to all needs is acquired. We ask that all bethel societies and friends of the cause, so far as may be consistent with local claims, take an interest in promoting this undertaking, which, when founded, will receive inmates from all their ports, and be a fitting crown to the entire bethel system. In conclusion, we will say, our work is a work of defense, as it is also a work of rescue, and pre-eminently a work of hope."

NEWS AROUND THE LAKES.

CLEVELAND, O.

The steambarge Desmond cleared light for Port Huron Tuesday. She will winter there.

The Wilson Transit Liners Missoula and Wallula are due to arrive in Buffalo with grain cargoes from Chicago.

Services in memory of Captain L. H. Weeks, late master of the lost steamer W. H. Gilcher, will be held at the home of his family at Vermillion, next Sunday.

The steamer Desmond arrived at this port on Sunday with lumber from Oscoda, the Wilson Transit Line steamer Olympia, light, from Buffalo, arrived Tuesday to go into winter quarters.

The old dock and offices of the D. & C. S. N. Co., 23 River street, will be vacated by the company on Saturday next, when they will move into their new quarters, foot of Superior street.

Mr. John Gordon, general manager of the Northern and Lehigh Valley Line steamers, visited this port on Wednesday and inspected constructive plans of the new steel passenger steamers, building at the yards of the Globe Iron Works Co.

The whaleback steamer Pathfinder, docked in the Ship Owners' dry dock on Wednesday, following the Pontiac which had been docked to survey her bottom after grounding at this port during the shoal water spell and storm of October 28th.

Christy Daniels, for the past two seasons No. 1 man at the life saving station, died at Lakeside hospital Sunday evening after a two weeks' illness of typhoid fever. Daniels was twenty-six years old and considered one of the most efficient members of the local crew.

The contract for constructing an iron steel bridge on Belle Isle Park, in Detroit River, has been awarded to the King Iron Bridge Company, of this city, their proposal being the lowest of nine. The amount of their bid was $3,975.

Captain Fred Houghton, of the steamer R. R. Rhodes, reports that on December 7, while the Rhodes was bound from Buffalo to Chicago, a fireman named Jerry Murphy fell overboard and was drowned. Murphy shipped at Buffalo, but his place of residence was unknown.

The handsome steam yacht Wadena, built by the Cleveland Shipbuilding Co., is now housed in for the winter at the shipyards of the builders. The Wadena has just successfully completed an ocean cruise and carried the American ensign into ports where the flag had not been seen before.

Mr. E. Platt Stratton, chief engineer surveyor for the "Record of American and Foreign Shipping" is due to reach this port today. The steamers now under construction at the yards of F. W. Wheeler & Co. are being built under the Record rules for classification by the American Shipmasters Association.

The D. & C. S. N. Co. is arranging to carry out the plan which they decided upon some months ago, of extending the service of their Lake Huron division to Toledo. The new boats now building will leave Toledo twice a week. Arrangements are being made for warehouse and dockage at Toledo.

There is a project now on foot for starting a transportation line between this port and Port Stanley, Ont., in connection with the London & Port Stanley R'y, which has been leased by Cleveland capitalists. The line will cover both passenger and freight service, the latter will be chiefly coal, which it is expected to ship in large quantities.

Mr. C. H. Tucker, shipping and forwarding agent for several large lines of steamers, will occupy in addition to his present wharf facilities the commodious dock and warehouses just vacated by the D. & C. S. N. Co. This location is intended especially for the two large steel passenger steamers now under construction to the order of J. J. Hill, president of the Great Northern Railway Co. The dock will receive such alterations as may be considered necessary to facilitate this special tonnage.

Once every month during the winter the Floating Bethel gives a free supper, and in the early spring during fitting out time a good warm supper is given each Sunday. The board of directors usually attend on these occasions, and heartily approve of this special feature, which has been carried on at this port for the last fourteen years. Much good results from the personal interest shown the men who arrive here in the spring, in many cases destitute, and without credit, and the close interest taken in such cases by Chaplain Jones, who was once a man of this type himself, has succeeded in gaining many converts and friends who ably assist in carrying on the good work from year to year.

Mr. William McMahon of Pittsburgh, assistant superintendent of the Western Seamen's Friend Society, (an organization which, by the way, does not seem to do much good among seamen at this port) is credited with stating last Sunday night at the Plymouth Congregational Church "that deck hands were not worth saving." Well! p'raps there is not so much in this soul-saving traffic after all, but it comes with poor grace from a sky pilot, whose society has been given one hundred thousand dollars in one year to prosecute this work, to say so. Let's see wasn't the late President Garfield a canal mule driver once, and was not some of the prominent vessel owners and managers, out of this port, deck hands in the early part of their careers. Mr. McMahon had better stay with his patronage at Pittsburgh instead of vaporizing here.

We are in receipt of a courteous invitation to attend the fifteenth annual ball of the Cleveland tug men, at Turn Hall, 866 Lorain Street, on Tuesday evening, Dec. 20th. The following officers are delegated to carry out successfully this much looked for annual: Capt. Wm. Robertson, president; H. H. Reye, vice president; N. J. Farrell, secretary; Capt. S. T. Leonard, treasurer; Capt. S. T. Dwyer, ass't treasurer; Capt. C. W. Fleming, Capt. Ph. Schied, sergt's-at-arms. Floor director, Capt. H. J. Coulter. Floor managers, Capt. J. A. Sweeny, Capt. Thos. McNaugh, H. H. Harmon, Capt. W. J. Dwyer, T. J. Mahoney. Reception committee, Capt. W. J. Dwyer, Capt. Wm. Robertson, E. E. Ennis, Capt. John Hobson, T. F. Beirs. Committee of arrangements, E. E. Ennes, Capt. John Hobson, T. E. Biers.

With the close of navigation, we find Capt. Reincke Jannsen, of the schooner Alta, taking in tow for a life consort Miss Rosa Moessuer, the charter being signed last Thursday night, at the home of Mrs. Rock, Pearl street. Rev. Von Schluenback piloted the matrimonial venture safely into winter quarters and did the honors in shipshape style, according to Gunter. After the tow line is tested and other important matters regulated with the consort, a departure will be taken for the Zenith City and the rigors of a Duluth winter experienced. Fair winds and pleasant weather, accompanied by the ordinary squalls at stated latitudes, will send the happy couple through the voyage of life with the usual orthodox reckoning.

For late navigation and taking all there is to be earned out of the season, the staunch Corrigan Line steamer Aurora is "in it" to the last. She cleared from Chicago for Buffalo Wednesday noon, Dec. 14th, with 4 cents on grain. The owners of wooden steamers, especially such tonnage as the Aurora, can flirt this actual fact in the teeth of the owners of the much vaunted metal vessels, all of which have sought winter quarters long ago. There are not many wooden steamers that could class with the Aurora in point of construction, and although it is late in the season to place insurance on freight, hull or cargo, anything put on the Aurora may be considered gilt-edged.

CHICAGO, ILL.

Special Correspondence to The Marine Record.

The Chicago E. M. B. A. No. 3 will hold regular weekly meetings during the winter months on Wednesday afternoons at 2 o'clock, at their new hall, No. 2 Market street.

The schooner James G. Blaine has received a new quarter deck and had ceiling and top sides calked. The schooner A. Mosher has received new stanchions, covering board and rail on the port side and had her top sides calked.

Captain J. L. Higgie, of the V. O. T. association, has recently paid $718 for fines and costs imposed upon him by the city authorities for violation of the smoke ordinance by the association tugs.

The Chicago Towing Co. will keep their tugs Wanbun and Tom Brown in commission.

At Miller Brothers shipyard the steamer Hiawatha was in dock for a piece of new keel and forefoot, the steamer J. W. Westcott for repairs to stern bearing and some calking, the steamer Avon for piece of new forefoot and some calking, the steamer Byron Whittaker for a new wheel and calking, the steamer Jesse H. Farwell goes in for recalking all over, the steamer John B. Lyon received new stringers and rail around the stern.

The stocks of grain in Chicago elevators last Saturday evening were 10,703,000 bushels of wheat, 5,289,000 bushels of corn, 2,605,000 bushels of oats, 433,000 bushels of rye, and 65,000 bushels of barley. Total 19,095,000 bushels of all kinds of grain, against 9,939,000 bushels a year ago. For the same date the Secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 75,570,000 bushels of wheat, 10,710,000 bushels of corn, 7,027,000 bushels of oats, 1,349,000 bushels of rye, and 2,340,000 bushels of barley. These figures are larger than the corresponding ones a week ago by 2,990,000 in wheat and smaller 10,000 in corn. The visible supply of wheat for the corresponding week a year ago increased 564,000 bushels.

The new fire boat, Fire Queen, built for service at the Worlds Fair has had steam up and is nearly completed; her machinery worked very satisfactory.

The steamer City of Rome has loaded 120,000 bushels of oats for winter storage on owners account. The schooner J. I. Case was chartered by W. M. Eagan for 50,000 bushels of oats for winter storage and delivery at Toledo. Fleming & Co., on Monday chartered the steamers Tokio and Raleigh for wheat for storage and delivery at Buffalo at 4 cents per bushel. Cook & Calbick chartered the barge Baltic, Tuesday for wheat for storage and delivery at Buffalo at 4 cents. Crosby & Rardon chartered the steamers Aurora and Missoula for corn to Buffalo at 4 cents. They will leave when loaded, probably Wednesday. Keith & Carr chartered the steamer Wallula for corn to Buffalo at 4 cents. She will leave when loaded, probably Wednesday. The barge Olive Janneke was chartered Tuesday for wheat for winter storage and delivery at Buffalo at 4 cents per bushel by Crosby & Rardon.

Capt. James Davidson is here from Bay City, Capt. James Millen from Detroit and Capt. M. M. Drake is here from Buffalo.

The steam barge A. D. Hayward, Capt. W. E. Ladner, and consort Peshtigo arrived Monday afternoon from Sault ste Marie with lumber.

John Gjeston, sail maker, has 37 suits of sails stored away in his sail lofts for the winter.

The schooner Horace Badger loaded lumber last week at Cheboygan, Mich., for this port. Capt. John Freer will bring her to this port if the weather permits.

Capt. J. V. Tuttle was here from Milwaukee Tuesday on business. He worked hard to get the Sturgeon Bay canal free from tolls, and he is much pleased that the canal has been handed over to the United States government, who will make it free in future. The Sturgeon Bay Canal Company claimed $250,000 as compensation from the government, but failed to prove that more than $87,000 was due to them.

Captain John Jenks, of the steamer White and Friant, returned from Manitowoc Friday, after placing the White and Friant and consorts Fanny Neil and Sherwood in winter quarters at Burger and Burger's shipyard.

The Dunham Towing and Wrecking Co.'s tugs T. T. Morford and J. H. Hickley will remain in commission; their tug Mollie Spencer will receive two Warrington water tube boilers to be allowed 200 pounds steam pressure; her engine is also to be compounded with cylinders 14 and 28 by 24 stroke, at a cost of about $7,000. Their tug O. B. Green will receive a thorough re-build, which will include steel deck frames and shelf pieces; also new foundation and bed plate for engine, and boiler thoroughly repaired, at a cost of $5,000. All of their tugs will receive iron coal bunkers and have their boilers covered with asbestoes. Their tug James McGordon will receive new decks, new wearing pieces and new steam steering gear. Their tug Robbie Dunham has received a new pilot house; their tug C. W. Elphicke has received a new boiler 14x6. The Dunham Co. have purchased a half interest in the South Chicago Tug Line, comprising the tugs Elphicke and Halliday, and they will add to that line a fine tug which is being built by James Elliott, shipbuilder at Sagatuck, of the following dimensions: 80 feet over all, 18 feet, 2 inches beam, 9 feet 6 inches hold, engine 22 by 24, by the Vulcan Iron Works; boiler 14 by 8 with double furnace, to be allowed 140 pounds steam pressure, by Mohr & Son. She will be supplied with steam steering gear and is to be ready for work in the spring. The company will establish a telephone service between Chicago and South Chicago for the benefit of the marine interests. The company would have had a very fair season, but for the smoke question. The extra expense on account of being compelled by the city authorities to burn hard coal on their ten tugs that do the river towing has cost on an average $2,200 extra per month.

The V. O. T. Co.'s tugs Protection, E. P. Ferry, J. G. Van Schaick and Calumet are still in commission. The Independent tug line have five of their tugs in commission. Their tug D. P. Hall went to South Chicago Tuesday to tow the steamer Iron Chief here to load grain for winter storage. They are taking the machinery and boiler out of their tug John Miner and will place it on the tug Dennis Brothers, which they purchased recently from Menominee parties, and was towed here from Milwaukee by their tug D. P. Hall last Saturday.

WILLIAMS.

BUFFALO FREIGHT STATISTICS.

Special Correspondence to The Marine Record:

BUFFALO, N. Y.—The official figures of Buffalo's lake commerce are all but completed at the Custom House. Your correspondent finished some of the footings with the following results: Receipts of flour for 1892 were 9,742,922 barrels, against 7,036,000 in 1891. Grain receipts foot up: wheat, 78,165,791 bushels, or about 2,000,000 bushels greater than last year; corn, 32,373,878 bushels. The last three cargoes being estimated: oats, 16,479,653 bushels, about 4,000,000 bushels ahead of 1891;

barley 4,565,963 bushels; rye, 1,316,536, a decided decrease from last year. Taking flour as wheat, the total grain receipts foot up 181,616,431 bushels, besides over 5½ millions of flaxseed, making the total of bushel freight over 187,000,000 bushels. Last year the highest figures were 164,000,000 bushels, showing a total increase of about 23,000,000 over what was the biggest year on record. Lumber receipts were 289,989,000 feet, against 257,000,000 in 1891. The ore trade is in an unsatisfactory condition, receipts showing a decided falling off, being but 221,568 tons, against 434,910 in 1891, and 551,940 in 1890. Receipts of pig iron jumped from 33,188 tons in 1891 to 46,165 in 1892. The rest of the miscellaneous freight list shows no important changes, the volume of business being about the same as last year.

It was the new steamer John B. Ketchum, built by the Craig Shipbuilding Co. of Toledo, O., not the V. H. Ketchum which struck in Niagara River last week. She was docked for survey on Tuesday but the result has not yet been announced, though she has evidently gone through herself to some purpose.

This week will see the arrival of the last up lake boat, the Wilson Transit Line steamer Wallula, from Chicago.

There is talk of a mammoth excursion scheme at Sturgeon Point for next year. It involves the building or chartering of two large steamers.

The little Canadian steambarge A. H. Jennie is doing business pretty late in the year. Pfohl & Co., who are doing salvage work on the flour thrown overboard from the steamers F. & P. M., No. 2 and Newburgh, having chartered her. She brought 1,200 barrels from the Newburgh and F. & P. M. last Sunday and went back for another cargo. The flour is strewn so far along the beach that much difficulty is experienced in hauling it to a point where it can be loaded on to the boat.

The Crystal Beach Steamboat Company is endeavoring to get some Buffalo parties to build them a boat this winter which they will charter for next summer. General Manager Rebstock is authority for the statement that a large new boat will surely be put on even if the company has to build it.

BAY CITY, MICH.

Special Correspondence to The Marine Record.

The river is now full of floating ice.

Captain N. Bartell has returned home, his boat the steambarge Montana has been put into winter quarters at Port Huron.

Capt. Harron of the steambarge Mineral Rock, laid up his boat at the Port Huron dry dock where she will receive repairs to her machinery and decks.

Captain Dorin Elliott of the tug Acme, and Miss May White of West Bay city, were united in marriage on the 7th inst. Capt. Elliot and bride will make their home in West Bay City.

The barge Kingfisher was discharged to-day from the dry dock, after a thorough recaulking. The Goshawk goes in to receive minor repairs.

At the Marine Railway the tugs Florence and C. C. McDonald, barge Ferrett, schooner J. W. Spaulding and lighter Kane have been pulled out and docked. Some of these will receive a thorough overhauling this winter.

A recent issue of the *Scientific American* contained an illustrated article on the four-masted schooner J. C. Fitzpatrick, recently built at Wheeler & Co.'s yard. The cut was reproduced from the handsome photogravure supplement of the schooner recently issued by THE RECORD.

The Bay City Iron Works last Saturday successfully cast a bed plate for an engine for one of the big boats being built at Wheeler & Co.'s. It measured 15 feet 4 inches in length by 12 feet wide, and weighs about 16 tons. It is the largest casting ever made in the Saginaw Valley.

Messrs. Hawgood & Avery of Cleveland, and David C. Whitney of Detroit, were here this week looking over the boats being built for them at Wheeler & Co.'s yard. The object of the visit was to see about the arrangement of the engines and boilers that are to be the propelling power, and the result of the conference was that they accepted Mr. Wheeler's proposition to place the machinery amidships instead of in the stern. They will also carry two masts, which will give them the appearance of ocean ships, in fact they will be up to the standard of ocean vessels in every particular. J. P. R.

MILWAUKEE, WIS.

Special Correspondence to The Marine Record.

There are laid up here 74 steam and 7 sail vessels, which is just 20 vessels in excess of the number moored here last winter.

The steamer F. & P. M. No. 5 is just out of the south yard dry dock of the Milwaukee Ship-yard Co. The steamer Thomas Davidson takes her place. The company have 12 vessels ahead to dock. The south side yard of the company, formerly owned by Wolf & Davidson has had $30,000 spent on it this season and is an A1 plant.

Joys Bros. & Co., ship chandlers, have moved into their own new building at Nos. 205-207 East Water st., and now have one of the finest ship chandlery and sail making establishments on the lakes. The firm of Powling & Harnisfiger, manufacturers of the Beck steam steerer, have put a number of these machines into steam vessels this season. Their two shops are among the largest machine shop plants in Wisconsin.

Harvey C. Beeson, publisher of *Beeson's Inland Marine Directory*, has been here the past week on business for his 1893 Directory, which will be the Sixth annual edition of the work, and promises to be a very complete one. JUNO.

KINGSTON, ONT.

Special Correspondence to The Marine Record.

In 1888 when the steamer Algonquin, built in Glasgow Scotland, first made her appearance on the lakes, marine men, looking at the form, thought that if this vessel could be navigated with safety, it was not necessary to pay much attention to model, but simply build a square box and put an engine in it. After four seasons trial it has been fouud necessary to put a new stern on the hull and the contract has been let to the Kingston Foundry and Engine Co., at a cost of about $10,000, the work to be done in the government dry dock this winter. Forty-four feet of the after section of the hull from the main deck to the keel will be cut away and replaced by new frames and plating. Messrs. Logan & Rankin, Toronto, supply the design and the work will be done under the superintendence of Mr. John Hazlett. The work will be commenced this week.

The steamer D. D. Calvin has been hauled out on the marine railway at Garden Island, and will receive an overhauling during the winter. A plate of ⅝ inch steel will be fitted under the deck each side from forward to the stern post and the hull will be further stiffened with diagonal iron strapping. Mr. Thomas O'Brien will have charge of the work.

The steamer Orion is at Collinsby, where her owners intend refastening the hull and stiffening it with a 20-inch steel belt. The Collinsby Rafting and Forwarding Co. will do the work.

D. G. Thompson, of Montreal, manager of the Montreal Transportation Co., with Captains John Gaskin and A. McMaugh, will leave this week for Scotland via. New York. They go there to contract for a new steel freight steamer for the M. T. Co., and Capt. McMaugh will look after the new boat while building, and command her on the lake trade when she is finished. The new boat will be 250 feet over all and 36 feet beam, and Henry Thurston, now of the steamer Resolute, has been engaged as chief engineer. Capt. A. McMaugh resigned command of the Algonquin to take charge of the new steamer.

Capt. James McMaugh, for many years master of the steamer Glengarry and other steamers belonging to the M. T. Co., has left their employ. He has been a very successful master and as he is as well acquainted with the Lake Superior trade as any other master in that trade, he will not be very long out of employment.

When the barge Glenora was unloaded it was found that 9,300 bushels of her cargo of wheat had been damaged, and this was sold to the Kingston grain ring at 33½ cents per bushel. 2,300 bushels of this was first-class dry wheat and was sold to the firm of Richardson & Sons; the balance was sold to a Brantford starch firm and shipped to that place via. G. T. R. Messrs. A. Nicoll, J. J. Higman and S. V. Parsons looked after the interests of the underwriters on the cargo. The Glenora is being hauled out on the M. T. Co.'s marine railway and a survey will be made by S. V. Parsons, of Buffalo, on behalf of Crosby, McDonald & Co., and Capt. T. Donnelly on the part of the owners. The hull looks as if it was pretty well strained.

Nearly seven million bushels of grain have been transhipped at Kingston during the past season.

The schooner Grantham received a new bottom and other repairs to her hull at Davis dry dock and is now in as good shape as she was before her late mishap.

On the last trip of the tug Petrel to Georgian Bay, while wind-bound in Tober morey, Capt. A. McDonald met with an accident by which three of his ribs were broken. Captain Milligan went up and took command of the Petrel and Capt. McDonald is now confined to his home in this city.

Messrs. Ogilvie & Co., of Montreal, owners of the cargo in the schooner Glenora, presented the captain and crew of that vessel with enough flour to last their families all winter.

Capt. T. Donnelly, steamboat inspector, is up in the Nippissing district on business for the Marine Department.

The Calvin Co., L'd, of Garden Island, have commenced to build a screw tug for service in the rafting and forwarding business. The hull will be built at Garden Island and the engines and boilers elsewhere. The contract for the latter has not yet been given.

Most of the companies in the passenger business are making preparations for a large trade next season. The R. & Ont. Nav. Co. have purchased a new side-wheel steel plate steamer at Baltimore, Md., for the Saguenay route, and are looking for another steamer for their western branch. The Thousand Island Steamboat Co. are re-building the steamer Sylvan Stream, and talk of adding another steamer to their fleet if they can procure a suitable one.

As soon as ice forms in the harbor here the Donnelly Wrecking Co. will lay 1200 feet of 24 inch pipe for the water works department of the city, and they also have the contract to build a pier in 65 feet of water at the end of the suction pipe. MAGNET.

STRUCTURAL ABILITY OF METAL VESSELS.

All lake shipbuilders intend to curb "the ruling passion" for breaking the cargo carrying record and in the future will not attempt to sacrifice a particle of the strength in the construction for the notoriety of their build carrying a few tons more than a vessel of similar dimensions.

Among those most prominent in this decision is the firm of F. W. Wheeler & Co., West Bay City, who will now make up for cutting the decks of metal vessels up into hatches by adding extra material and weight, feeling sure, as they say, "that the safety of life and property will fully compensate for the loss of 100 or 200 tons of carrying capacity, and owners who are not willing to pay the price to get ships of this kind will have to apply elsewhere."

In carrying out these views, Wheeler & Co. have prevailed upon the owners of the new steel steamer W. H. Gilcher to allow an extra sixty tons of metal to be put into this lengthy hull in deck stringers and sheer strakes, although after great punishment and heavy cargoes during the past season she showed no signs of working. It has been stated that the engines of the Gilbert would be moved amidships, but this is not so, although, when light, it is like hanging a vessel by the ends to place heavy machinery chock aft, still the Gilbert can stand this all right. In the long new ships building for Hawgood & Avery and David Whitney the machinery will be placed amidships.

FLOTSAM, JETSAM AND LAGAN.

The Welland Canal closed at midnight on Monday for the season.

The actual construction of the large Government dry docks at Puget Sound naval station at Port Orchard has commenced.

The loss on the tug International, which burned at Amherstburg Thursday night, is about $6,000. There was very little insurance on her.

Additional ore docks are to be built at Two Harbors and Superior during the coming winter to facilitate the handling of the Mesaba range ore.

The Ann Arbor No. 1 is now doing excellent work in transferring railroad cars across Lake Michigan between Frankfort and Ahnapee. Her recent stranding caused but little damage and her capability is highly spoken of.

Capt. B. Inman is preparing to have built during the winter at the yards of the American Steel Barge Company a tug more powerful than the Cleveland built tug. the Record. Her engines will be 24 by 28. She will be an ice breaker and a powerful wrecking tug.

The last clearance from Sault Ste. Marie for this season was the schooner Peshtigo, and the steambarge Colwell for Chicago, Tuesday morning, December 6th. The Peshtigo loaded at Ainsworth & Alexander's mill, and carried a cargo of 800,000 feet of lumber.

At Cramp's shipyard, Philadelphia, Pa., the keel-blocks have been laid for two of the five new vessels of American registry which the International Company have engaged to build for the purpose of carrying transatlantic mails, under the Postal Subsidy Act. The vessels are to be of enormous size, over 500 feet long and 60 feet beam.

The steam barge John C. Pringle and consorts Ben. Harrison and Sweetheart, have been bought outright by Underwood & Cowan, lumber shippers at Menominee, who have owned a fourth interest in them for about a year. During this time they also bought the Arctic.

The largest cargo steamer ever put afloat built by Wm. Doxford & Sons, on the Wear, in England, and the greatest cargo vessel in the world was successfully launched last month. The vessel, which is built of steel, is 465 feet long, 52 feet beam and 36 feet depth, has a gross register of 6,400 tons, deadweight capacity 9,250 tons on 25 feet draught, and gross displacement of 13,600. The engines have cylinders 30, 49 and 78 inches by 51 inches stroke and she has three double-ended boilers which will drive the vessel when fully loaded at a speed of 10½ knots. She has been named the Samoa and carries two pole spars with jib-headed canvas.

TESTING STEEL FOR SHIPBUILDING.

(BY JOSEPH R. OLDHAM, N. A.)

I think the time has arrived for those in any great and direct way responsible for the construction of our steel steamers, to take early action, as may seem to them good, to rouse the producers of the material of which lake steamers are mainly constructed, to a sense of their responsibility, as it is more than evident to one who has watched the construction of large steel lake steamers in all of the old steel shipyards on these lakes, since steel came commonly into use, that much of our steel is not what it ought to be. Having had several steel steamers to superintend during their construction for the last two or three years, it may be of use if I cite some experience I gained in connection with one of them. The steel of which the steamer is constructed was not cheap steel, nor was it manufactured at a small works; on the contrary, it was purposely purchased from one of the most reputable firms. Tests were regularly applied, which were about as follows: Phosphorus, .0281; dimensions, original, 1,992x2,201; dimensions after fracture, 1,662x100; area, original, 043,779; area, after fracture, .1662; elastic limit, actual, 13,408 pounds; maximum load, actual, 2,529 pounds; elongation in eight inches, 2.161; elastic limit per square inch, 30,618; tensile strength per square inch, 57,796. per cent. of elongation in eight inches 27.02; per cent, of reduction of area,

The character of the fracture was silky.

Now, if ever a shipbuilder might take credit to himself for doing his best to have his steamer constructed of reliable materials, the man I refer to was that man; but as to the result: One plate was fitted in place and cracked after being so fitted; this was removed and a better plate was ordered; it came, was fitted in place with the same result; another and another, and yet another plate were ordered sent to this yard, and were worked in with the same lamentable result. These plates were not of the same form, nor were they worked into the same part of the vessel; there was no fault with the handling of the plates, for they stood working and fitting together like the boilers of the Czar's yacht; but when we had all gone to sleep they cracked. Now, the shipbuilder was hardly at fault in this instance; he lost time and money over these plates. Perhaps the constructor was not at fault in connection with any recent great disaster. Let me quote an authority as a possible remedy for an intolerable state of things.

"The steel will be required to withstand the whole of the following test, to be applied at the steel works under the personal inspection of the society's surveyor, to samples selected by them from every charge or cast employed in the manufacture of the material, and these samples, when marked by them for testing, should be followed by the surveyor through the different stages of preparation until the tests are completed. Should the samples selected by the surveyor not fulfill the test requirements, the plates or angles from which they were cut are to be rejected, and further tests are to be made before any material from the same charge can be accepted.

"When a surveyor is not in constant attendance at the steel works for the purpose of seeing the material tested, the association will require that tensile, and temper, and cold bend tests shall be applied either at the steel works or at the shipyard, to not less than one plate, angle bar, or bulb plate in every batch of fifty or a less number. Should the samples tested not fulfill the test requirements the whole of the material from that charge is to be rejected, and further tests are to be applied to a sample from each of the other charges of which the batch is composed. In the event of any of these samples also failing, the whole of the material from the same charge or charges is to be rejected as in the first instance.

"The steel used for rivets is to be of especial quality, soft and ductile, and samples of the rivets should be tested by being bent both hot and cold, by fastening down the heads, and by occasional forge tests, in order to satisfy the surveyors of their thorough efficiency.

"Strips cut lengthwise or crosswise of the plate, and also angle and bulb steel must have an ultimate tensile strength of not less than 30 and not exceeding 35 tons per square inch of section, with an enlongation equal to at least 16 per cent. on a length of eight inches before fracture. Steel plates intended for flanged garboard strakes, if specially marked for identification, may be tested to within the minimum limit allowed for boiler plates, viz: 29 tons tensile strength per square inch. Steel angles intended for the framing of vessels and bulb steel for beams may have a maximum tensile strength of 37 tons per square inch of section, provided they be capable of standing the bending tests, and of being sufficiently welded. Strips cut from the plate, angle, or bulb steel are to be heated to a low cherry-red and cooled in water at 82° Fahrenheit and must stand bending double round a curve of which the diameter is not more than three times the thickness of the plates tested. In addition to this samples of plates and bars should be subjected to cold bending tests at the discretion of the surveyors."

The problem must be faced. Reliable steel must be produced if we are not to retrogade to all iron or wooden ships again. More careful annealing of steel whch has been locally heated may make such steel more reliable, but only a change of the material requiring to be furnaced can secure us proper, that is, reasonable security. If the foregoing is a system which may bring about partial, though only partial security, I may say that as yet we have very litile security; for we have no such system.

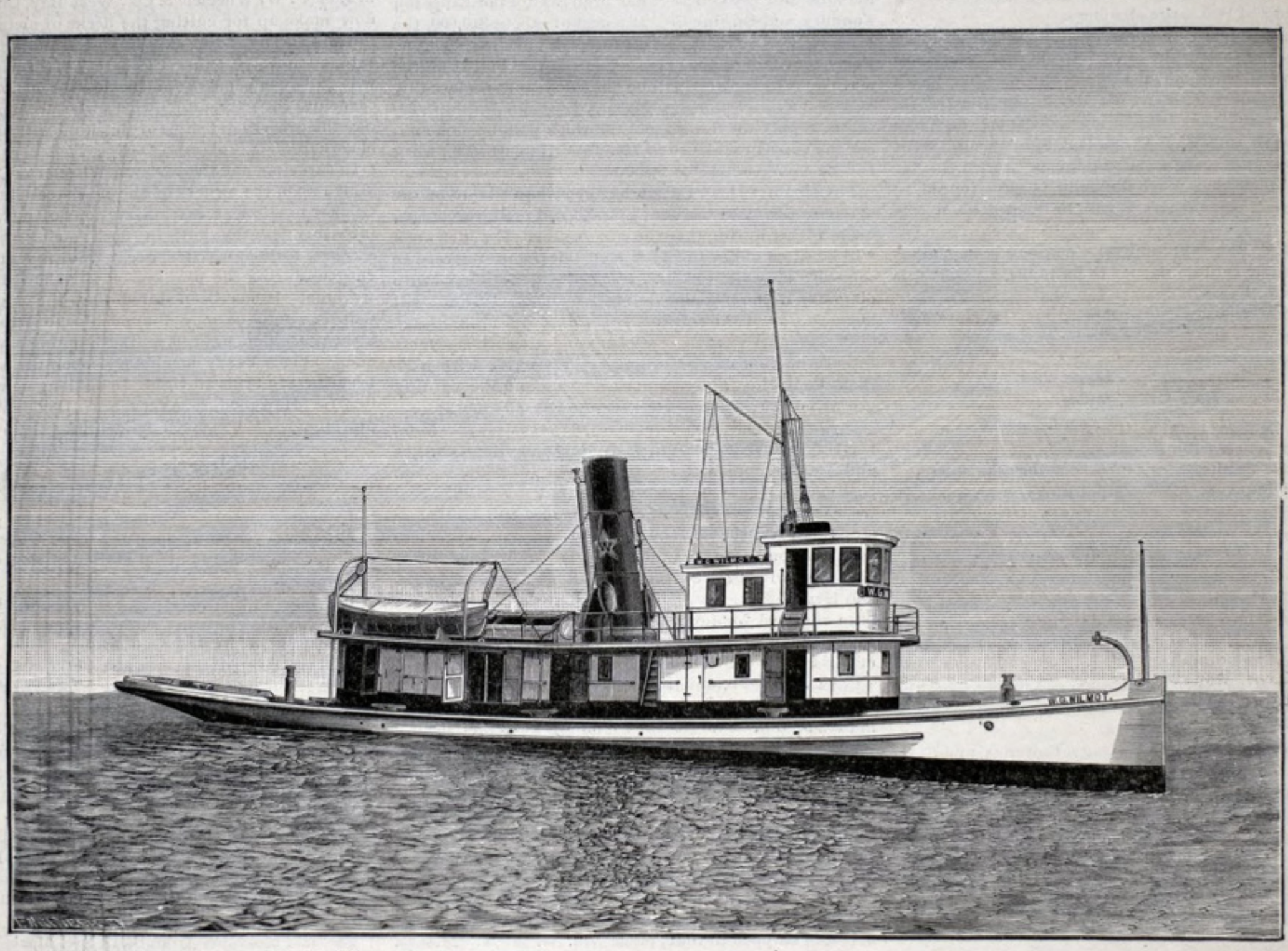
A LAKE BUILT TUG FOR NEW ORLEANS.

(Illustrated.)

Through the courtesy of *The Engineer*, New York we are enabled to present to our readers an engraving of the powerful and handsome tug W. G. Wilmot recently launched from the yards of F. W. Wheeler & Co., West Bay City, Mich., for service at New Orleans, La. The boat is named after her owner, is of steel throughout, and of the following dimentions: Length over all 110 feet 6 inches; beam 23 feet; extreme draught 11 feet; the engines are triple expansion, with cylinders 16″ 24″ 40″ by 28″ and drive a screw 9 feet 3″ by 12 feet. The h. p. cylinder has a piston valve; the other two cylinders have slides, worked by link motion, which is handled by steam reversing gear.

The boiler is of the Scotch type, 12 feet 6 inches diameter by 12 feet 8 inches long, with three furnaces, 40 inches diameter by 8 feet long; the grate area is 63 square feet; heating surface, 2,000 square feet. A fe-ed water heater is also furnished in addition to other fixtures. The Wilmot has steam-steering gear, and a complete electrical outfit, including search light. On her trial trip, in Saginaw Bay, the W. G. Wilmot, made 16 miles per hour under partial power, developing 700 h. p. on 160 pounds of steam, and 125 revs. per minute. This and other contracts for moderate sized vessels is sufficient evidence that the ship building industry on the lakes is only limited by the size of the St. Lawrence system of canals.

Even the most sanguine must admit that the system of sending tonnage to the seaboard in sections is not an economical one, although it has been successfully accomplished in the case of the large freight steamers Mackinaw and Keweenaw, also built by F. W. Wheeler & Co., yet, such contracts can only be placed at lake shipyards under special circumstances. Where the tonnage can proceed in due course and without extra expense being incurred there can be little doubt but that lake shipbuilders now can figure at as close a margin as any shipyard on the coast and from past experience can produce equally satisfactory tonnage in wood or steel, sail or steam.



TUG "W. C. WILMOT," BUILT BY F. W. WHEELER & CO.

AIDS TO NAVIGATION ON THE LAKES—LIGHT-HOUSES, BEACONS AND FOG SIGNALS.

INDISPENSABLE.

The complete estimates of appropriations submitted to Congress for aids to navigation on the lakes for the fiscal year ending June 30, 1893, are as follows:

Big Bay Point, Lake Superior, light and fog signal station, $25,000.

NOTE.—Quite a number of vessels have been wrecked on this point in past years.

Buoyage at Chicago Harbor on account of Columbian Exposition, $29,500, and completing light-house and fog signal on east end of outer breakwater, $15,500.

Fog bell at Escanaba, $1,100.

NOTE.—A fog bell struck by machinery at this station would be a valuable aid to navigation.

Fourteen Mile Point, Lake Superior, light and fog signal, $20,000.

NOTE.—All the commerce to and from Keweenaw Point passes directly by Fourteen Mile Point. A new coast light is needed here.

Grassy Point, Maumee Bay, Ohio, for straight channel range lights, $8,000.

NOTE.—The Government is cutting this channel, which when completed will be eight miles long. These range lights will be needed to make it navigable at night.

Oswego, N. Y., steam fog signal, $4,300.

NOTE.—There is a bell at this station. Captains report failure to hear it when wit in half a mile. This uncertainty of a bell as a fog signal is generally admitted. The substitution of a steam fog signal for the bell is called for by commercial interests.

Patrol steamer for St. Mary's River, $4,000.

At or near Pere Marquette, Ludington, Mich., a steam fog signal, $5,500.

NOTE.—The extension of the pier on which the light stands is progressing rapidly and will soon be finished. A steam fog signal has long been needed, and its establishment is now practicable.

St. Marys River lights, for the further and more complete lighting of St. Mary's River, including the necessary light vessels and patrol steamers and the maintenance of the whole for one year, submitted March 3, 1891, $145,562.

Completing the structure at Seul Choix Pointe, Lake Michigan, $3,500.

NOTE.—It was found impossible in 1892 to complete the work made on the estimates of 1885, owing to the increased cost of labor and material. A light is now displayed from a temporary tower erected last year, which tower should be replaced by a permanent structure as soon as may.

Light-house tender for the Ninth District, $95,000.

NOTE.—The Dahlia was built in 1873, is nearly worn out, a larger and faster vessel is needed, one strong enough to keep at work in the young ice, while merchant vessels are running and which shall embody all of the improvements made of late in lake vessels. As her headquarters will be at Chicago, and as she will be much visited during the Columbian Exposition she should be a model light-house steam tender.

The foregoing all come under the head of indispensable.

NECESSARY.

These aids are considered urgently necessary for the safe and convenient navigation of the different localities.

Ballard's Reef, Detroit River, light and fog signal, $100,000.

NOTE.—The private lights now kept after a fashion on this reef should be replaced by a government light, kept up to the government standard.

Cheboygan River front range light station to purchase an additional lot alongside the light house, $1,750.

Depot for the Ninth and Eleventh light-house districts at Scammon's Harbor, Lake Huron, $15,000.

NOTE.—The depot for the ninth light-house district is at the southern end of Lake Michigan, at St. Joseph, while the depot for the eleventh district is at Detroit. A depot is needed near the northern end of the two lakes for the storage of coal, buoys and other heavy supplies needed for use in the many light-houses on the upper part of the two lakes.

Eagle Harbor, Lake Superior, fog signal, $5,500.

NOTE.—A steam fog signal at this station would be a valuable aid to navigation.

Galloo Island, Lake Ontario, fog signal, $5,700.

NOTE.—Vessels need to locate this light as soon as possible. Fog and thick weather often prevail, especially in the fall. At such times the position of the station can only be made known by a fog signal.

For the purchase of gas buoys for general use, $30,000.

Maumee Bay range lights, Ohio, $4,100.

Menasha range lights, Wisconsin, establishing range lights on Menasha river, a tributary to Lake Michigan, $500.

NOTE.—The re-establishment of the light which was discontinued and the establishment of another small light will guide vessels through the earth-cut and the rock-cut, which are quite intricate.

Old Mackinac Point, providing additional land for the light-house site, $1,000.

Peshtigo Shoal, Green Bay, light and fog signal, $10,000.

NOTE.—The important commerce now demands a reliable marking of this dangerous shoal.

Poe's Reef, Straits of Mackinac, a steam light vessel and fog signal, $25,000.

NOTE.—The entire commerce of the Straits of Mackinac, said in 1890 to amount to 11,222 000 tons of freight, passes dangerously near this reef. It will cost much less to place a light-ship here, which can be removed at the close of navigation.

South Fox Island, Lake Michigan, steam fog signal, $5,500.

NOTE.—The passage between South Fox and North Manitou Islands is much used by vessels. A steam fog signal here would make the passage available in thick weather.

Tibbett Point, Lake Ontario, steam fog signal, $4,300.

NOTE.—This light is at the entrance to St. Lawrence River. Fogs largely prevail there. It is especially important that its location be made known in thick weather. This can only be done by a steam fog signal.

Wilson Harbor, Lake Ontario, establishing a light station, $2,500.

NOTE.—In thick an foggy weather and after nightfall it is difficult for vessels to make this harbor. A light will make it much safer than it is now.

DESIRABLE.

In the opinion of the Light-House Board these desirable aids are necessary to carry out the general scheme for the lighting of our coasts, and which would be of great service to navigation.

Bayfield, Wis., Lake Superior, a light station, $5,000.

NOTE.—This is said to be the best harbor of refuge on that coast. The commerce of the place is also increasing. To make the harbor available at night a light is needed.

Big Sable, Mich., steam fog signal, $5,500.

NOTE.—A steam fog signal is needed to complete this important light station. The entire traffic of Marquette, claimed in 1890 to be some 1,772,400 tons, passes close to this station. During southerly gales the whole commerce of Lake Superior is forced to hug the southern shore.

Lorain, Lake Erie, steam fog signal, $4,300.

Chequamegon Point, Wis., moving and re-building the main La Pointe light and establishing a harbor bell and light at or near Chequamegon Point, Lake Superior, $10,000.

NOTE.—By the act of March 2, 1889, the steam fog signal was authorized and appropriated for. The present light at La Pointe should be nearer to the inner point that it may be a great help to vessels to clear it. A harbor and a fog bell should be placed on the inner point towards Houghton.

Carlton Island, Lake Ontario, a light station, $8,600.

NOTE.—The channel for large vessels near Carlton Island which crosses from the American to the Canadian side is both dark and obscure. A small light would make it available at night to heavy tonnage.

Devil's Island light, Wis., constructing a permanent tower, $22,000.

Eagle River, Mich., moving the light to Sand Hills, $20,000.

NOTE.—This light has outlived its usefulness. If moved to Sand Hills it would be of great service as a coast light. Vessels bound east from the head of Lake Superior first make the land and commence to turn in rounding Keweenaw Point at Sand Hills, 12 miles west of Eagle River.

Fairport, Lake Erie, steam fog signal, $4,700.

Forty Mile Point, light and steam fog signal in the vicinity of Hammond's Bay, $25,000.

NOTE.—There are no lights on the 50 miles of coast between Cheboygan and Presqu'ile lights. The commerce of the vicinity is of great magnitude and value, and a light should be placed somewhere about midway between the two named points.

Gladstone, Little Bay de Noquette, light station, $10,000.

NOTE.—It is stated that the Minneapolis, Sault ste Marie and Atlantic railroad will make this an important shipping port. Last year over 300 vessels entered the harbor, and it is expected that next year the number will exceed 1,000.

Grand Marias, Lake Superior, light and fog signal, $15,000.

Little Gull Island, St. Martin's passage entrance to Green Bay, light and fog signal, $20,000.

Ludington, Mich, construction of keeper's dwelling, pier-head light and fog signal, $4,500.

Manistique, Mich., establishing a light-house and fog signal on or near Pointe aux Barques, $32,000.

NOTE.—There is a space of 13¾ miles off Pointe aux Barques not covered by any light.

Manitowoc, Wis., steam fog signal on pier head, $5,500.

Mendota, Bete Grise Bay, entrance to Lac la Belle, Lake Superior, re-establishing the light, $7,500.

North Manitou, light and fog signal, $20,000.

Hat's (or Pat's) Point near Grand Portage, Lake Superior, $15,000.

NOTE.—This would serve as a coast light and guide into two excellent harbors, one on each side, viz.: Grand Portage Bay and Waswaugoning Bay. The harbor of refuge near this point is the only one on the north side of Lake Superior. There is none on the Canadian side.

Port Clinton, O., re-establishing the light, $1,500.

Portage Lake Ship Canal, fog signal on pier head, $5,500; constructing keeper's dwelling, $3,500.

Porte des Morts, range lights and steam fog signal at or near Plum Island, $21,000.

NOTE.—These aids to navigation would be invaluable to vessels going through the passage at night or in thick weather.

Presqu'ile, Pa., Lake Erie, steam fog signal on pier head instead of bell, $4,300.

Round Island, light and fog signal, $15,000.

NOTE.—This light and fog signal are needed to enable vessels to hold a safe and close course through the narrow strait between Mackinac and Round Island.

St. Joseph, Mich., steam fog signal on pier head, $5,000.

St. Martin Island, entrance to Green Bay, $15,000.

Seul Choix Pointe, increase of appropriation for light and fog signal, $5,500.

Sheboygan, Wis., steam fog signal on pier head, $5,500.

South Bass Island, Lake Erie, a light station, $8,600.

NOTE.—This light would aid vessels to clear the shoals in the south passage, which is much used by vessels bound to and from Sandusky and Marblehead, or to Toledo from the east or during heavy blows from the northeast. The dangerous shoals are buoyed for daylight passages and the light is needed to make the passages navigable by night.

Sturgeon Bay Ship Canal, a light station at Lake Michigan entrance, $20,000.

Price of labor and material have appreciated so much since these estimates were made, mainly by reason of the eight-hour law, that each of the estimates should be increased 25 per cent. to enable the Light-House Board to construct these works.

INCREASED SPEED FROM PROPELLER WHEEL.

The Trout wheel put on the steamer Marquette increased her speed running alone loaded one mile per hour; with tow, ¼ of a mile per hour, and on two less revolutions than with the old wheel. This is more than equal to a round trip to Duluth for the season.

BIDS ON THE TWENTY FOOT CHANNEL.

Bids have been opened by Gen. Poe, United States Engineer, for work on the twenty-foot channel between Chicago and Duluth and Buffalo, the work to begin as early as possible next spring. The bids for the work at Grosse Point, ranged from 14⅞ to 43 cents a cubic yard of excavation. Breyman Bros. of Toledo were the lowest bidders.

The bids for removing 90,366 yards of rock at Sailors' Encampment and St. Mary's River were: L. P. & J. A. Smith, Cleveland, $5 per square yard; R. J. Crain of Detroit, $2.74; John Hickler of Buffalo, $2.43; Carkin, Stickney and Cram of Saginaw, $3.86; Hingston & Wood of Buffalo, $4.18; Dunbar & Sullivan of Buffalo, $3.23. John Hickler of Buffalo was the lowest, the aggregate amount of his bid being $219,589.38.

The bids for all the sections are now in. If the amount doesn't exceed the appropriation, $3,340,000, the contracts will be let; otherwise new bids will be called for.

TRAFFIC THROUGH ST. MARY'S FALLS CANAL.

The November traffic through the St. Mary's Falls canal, furnished through the courtesy of Gen. O. M. Poe, is as follows:

East bound: Flour, 773,793 barrels; wheat, 5,737,579 bushels; building stone, 6,699 tons; copper, 11,091 tons; iron ore, 279,272 tons; pig iron, 3,236 tons; lumber, 52,372 M feet; unclassified freight, 17,103 tons; passengers, 107.

West bound: Coal, 216,327 tons; flour, 1,003 barrels; grain, 6,120 bushels; manufactured iron, 8,612 tons; salt, 51,289 barrels; unclassified freight, 46,434 barrels; passengers, 588.

The total east-bound freight was 653,404 net tons, and west-bound, 275,568, making a total tonnage movement for the month of 928,972 net tons and 695 passengers.

A brief resume of the season's work compared with that of last season is as follows:

ITEMS.	DESIG'N.	QUANTITY.		INCREASE.	
		Season 1891	Season 1892	Amount.	Per cent
Vessels	Number	10.191	12.580	2.389	23
Lockages	Number	4.981	5 867	886	18
Tonnage registered	Net tons	8.400 685	10.647 203	2.246.518	27
Tonnage freight	Net tons	8.888.759	11 214.333	2 325.574	26
Passengers	Number	26.190	25 896	.....	.....
Coal	Net tons	2.507 532	2.904 266	396.734	16
Flour	Barrels	3.780.142	5.418 135	1.637.992	43
Wheat	Bushels	38.816.570	40 994.780	2.178.210	6
Grain other than wheat	Bushels	1.032.104	1.666.690	634.586	61
Man'f'c'd and pig iron	Net tons	69.741	101.520	31.779	46
Salt	Barrels	234.528	275 740	41.212	18
Copper	Net tons	69.190	64.993	.....	.....
Iron ore	Net tons	3.560.213	4.901.132	1.340.919	38
Lumber	M ft. b. m	366 305	512.844	146.539	40
Silver ore	Net tons	1.731	1.930	199	11
Building stone	Net tons	44.080	39.698	.....	.....
Unclassified freight	Net tons	417.093	459.146	42.053	10

With such an annual increase as shown in the foregoing over that of 1891 amounting to 26 per cent. it is now certain that the season of 1893 will show an equally gratifying result, derived chiefly from the many new mines, railways, and mechanical industries already commenced and being organized in the Lake Superior region.

REMOVAL NOTICE.

In January, 1893, the Chas. F. Elmes Engineering Works will be removed to corner Morgan and Fulton streets, Chicago. New and improved machinery, with greater facilities for handling a larger class of work, will be added to the new plant and Mr. Elmes looks for a still wider patronage from his many marine friends trading to Chicago.

A NEW SHIPYARD FOR DULUTH.

It is now rumored that Duluth is to build a turtle-backed steel steamer of a model between the whaleback, monitor and straightback type of vessels, now so well known to the lake marine community. The new design is expected to show great cargo efficiency, strength and seaworthiness, having a midship section resembling the whalebacks, stem like the monitors, that is, with the fore-foot reduced almost to nothing but carrying the usual stem above water, and sheerless on the upper works like the straightbacks.

Among the names mentioned as being interested in the new departure are O. H. Simmonds and R. S. Munger, stockholders in the Phoenix Manufacturing Co., Duluth, Henry W. Wheeler and James Clark, of Duluth, and others. Mr. Clark was, up to a few months ago, draughtsman for the American Steel Barge Co., and it is understood that the new model has been devised by him. It is not known what amount of capital will be put into the shipyard, but if the first turtleback proves a success, it is said that continual building is to be carried on. Financial backing to the amount heretofore found necessary would in a great measure be discounted if the sixty-fourth share system was adopted, and this feature will no doubt be sooner or later introduced in the ownership of certain classes of lake tonnage.

The Marine Record,

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CLEVELAND, O., DECEMBER 15, 1892.

REPRESENTATIVE CURTIS, of New York, has had a separate bill passed for a fog signal at Tibbett's Point, Lake Ontario. He stuck to his object, and, despite "watch-dog" Holman's quibbing, gained the point. Lake marine interests require more men with the pertinacity of a Mr. Curtis, as this aid only came under the head of "necessary," not "indispensable."

HON. E. C. O'BRIEN, Commissioner of Navigation, favors the formation of a national naval reserve, to be under the jurisdiction of the Secretary of the Navy. The Commissioner ably grasps the subject and realizes that a naval reserve should be an auxiliary to the regular service, and not stultified or isolated into a State quasi naval-military corps. The State naval militia may strut around in swaddling clothes until an inception of the duties for which it was organized dawns upon its members or a Secretary of the Navy, but, it will never amount to an efficient naval auxiliary until it is formed on national lines and placed within the strictly naval limits of the regular service. This view of the question has been advocated by THE MARINE RECORD for several years, and we are pleased to note the endorsement of same by a federal officer of so much official technical weight as the present Commissioner of Navigation.

A SYNOPSIS of the career of the late Capt. A. W. Rosman contained in another column of this issue, seems almost an incredible experience in the light of the present enormous proportions of lake tonnage. Only fifty-eight years ago, Chicago almost an unknown point, and a 7,000 bushel vessel was considered an immense carrier! When such tremendous strides of advancement has been made within the active career of a lifetime, who can say, or even guess, at the probable volume of northwestern commerce a quarter of a century hence. Capt. Rosman enjoyed an experience granted to but few, and we hope that a kindly light permitted him to shape a neat course to that haven of rest where all who lead pure, honest, manly lives, may coil up their ropes and enter into secure anchorage, taut and trim, alow and aloft, and safely moored.

SUPERINTENDENT Frankland of the Western Seamen's Friend Society, owns a small island on the Mississippi, and intends to establish thereon a snug harbor for the aged and decrepit river-men, he asks for $50,000 to enable him to open the institution under the auspices of the society. This is a private enterprise and would depend for its continuance entirely upon private subscriptions, donations, legacies, etc. There ought to be a national home established for the worn-out seamen of the United States mercantile marine. This home should be centrally located and made eligible for incapacitated seamen who had served under the flag for a stated number of years. It is wrong to saddle private charities with the support of wards of the nation, and while we hope that Mr. Frankland's Island scheme may go on and prosper, we would much prefer to see a more extensive, liberal and inclusive system adopted under government control, for the amelioration of the present condition of aged and decrepit seamen who have worn out their lives of usefulness in the commerce and service of their country, and are now thrown on one side and neglected as useless appendages to the body politic. A bill for the establishment of such a home was introduced at the last session of Congress at the request of the Veteran Seamen's Benevolent Association, of Cleveland, Ohio but it met the ordinary fate of being shelved in committee, and it now awaits a revivification by a humanitarian whose congressional energy would ensure due attention being paid to so worthy a national benevolence.

WAR SHIPS ON THE LAKES.

The Department of State has sent an interesting document to the Senate dealing with the subject of war vessels on the lakes and the abrogation of the treaty with Great Britain in 1866. A careful reading of the *Congressional Record* leaves no doubt that a resolution passed Congress abrogating the treaty and notice was given to Great Britain of the action of Congress, but the status of the case since that time has been a mystery, we presume, to all outside of national diplomatists. Certainly there are many interested in the question who were led to believe that the treaty was no longer in force.

According to the statements submitted by the State Department, it is understood that the notice of abrogation issued under the act was withdrawn within a few days after it was issued, and that, for reasons then existing, both countries agreed to consider the treaty still in force. It is still further shown that the treaty is so regarded to the present day by both governments, notwithstanding the act of 1866.

The reopening of this topic of discussion has caused a number of senators and representatives to fly off at a tangent and assert that even a modification of the treaty would result in having the lakes swarmed with British naval vessels, and that the United States would therefore be compelled to support an equal armament on these waters. This ground was entirely threshed out in 1866, as a reference to the *Congressional Record* of that date evidences, and we have again a waste of oratory on the impossible.

The object or cause of Senator McMillan reopening the treaty question was in response to action taken by a convention of lake shipbuilders last winter, who desired to know why, if the treaty was abrogated, according to the act of 1866, they, as American citizens pursuing the industry of shipbuilding in all of its branches, were debarred from building or submitting bids on the construction of naval tonnage. It has now been determined that the treaty is still in force, therefore, a hull ultimately intended for naval purposes cannot be put together on the lakes. Such being the case, the only change or modification that can be looked for on the industrial side of the question (and this is the only phase in which the treaty may now be regarded) is that naval tonnage under construction at lake shipyards must be destined for coast or ocean service and not to be placed in commission or even equipped with their armament in these land-locked waters. Such a clause would be all that is required, and even the amount of naval tonnage under construction might be limited, though there is little cause to imagine that orders for any significant volume or high classed offensive or defensive tonnage would be placed at lake shipyards, the passage to the coast preventing any powerful, pretentious or deep draft vessels from being built on the lakes.

The idea of the lakes being flooded with war vessels in the event of the treaty being annulled is far fetched, as the connecting links to each lake are insuperable barriers to inter-lake communication and if a belligerent had a naval fleet here on the breaking out of hostilities the greatest concern would be to keep them out of the way of shore batteries, but, this view of the case shows how completely ridiculous it is bringing to the front the subject of naval warfare on land locked, isolated, or what can easily be made such, narrow waters as the lakes. The treaty bears an industrial aspect, or it is of no importance either one way or the other, as a shell through a canal lock, a torpedo, or a simple obstruction is sufficient to stop inter-lake communication, at the same time there ought to be found some way whereby American shipbuilders might be placed in a position to accept and carry out the constructive work desired by their own government without vitiating international agreements enforced by a diplomatic policy, as opposed to the industrial progression of an important and distinctively national art.

UPBUILD THE UNITED STATES MERCANTILE MARINE.

The shipping interests dwelt upon in the annual report of the Commissioner of Navigation, just issued, is a complete epitome of the past and present standing of the United States mercantile marine, both domestic and foreign. The causes of decline and the unfair legislative discrimination in mail, naval and tonnage subsidies which American bottoms now labor under, is brought clearly to the front, and the measures advocated for the upbuilding of our merchant navy are fraught with unquestionable pertinency, couched in the following terms:

"The importance of re-building the American merchant marine appeals to the patriotism and interests of every American citizen. It is estimated that about $200,000,000 a year is now being paid by American citizens to the owners of steam and sailing vessels under foreign flags, and chiefly under the British flag. This represents the diversion of an enormous sum, not only from American shipowners and American shipbuilders, but also from American miners, American manufacturers and laborers in almost every conceivable branch of industry.

In the year 1791 Thomas Jefferson said:

"If particular nations grasp at undue shares of our commerce, and more especially if they seize on the means of the United States to convert them into aliment for their own strength, and withdraw them entirely from the support of those to whom they belong, defensive and protective measures become necessary on the part of the nation whose marine sources are thus invaded, or it will be disarmed of its defense, its productions will be at the mercy of the nation which has possessed itself exclusivley of the means of carrying them, and its politics may be influenced by those who command its commerce. Jefferson's Works, vol. 7, p. 648."

In the spirit of this patriotic utterance of the writer of the Declaration of Independence the Commissioner of Navigation endeavores to point to a line of policy whereby the American merchant marine and all its affiliated commercial and international interests may be protected against the injurious results of foreign commercial and political aggressions.

IN the classification of aids to navigation on the lakes under the head of "indispensable," "necessary" and "desirable," it would seem that the Light-House Board had advanced better reasons for some of the desirable aids being indispensable than those that are listed as being necessary. This style of advanced grading may possibly be the best means of humoring a Congressional committee, but to a "man up a tree" it seems like tacking ship with a free wind. We presume the "desirable" aids will be classed as imperatively necessary or absolutely indispensable for a future committee to work upon and by a graded advancement be finally authorized however, this looks too much like a weak-kneed policy for important measures requiring national legislation. There is not an unnecessary aid asked for, and such being the concensus of opinion among practical men, the hands of the Light-House Board should be ably held up by the marine interests and Congressmen from the lake districts importuned to exercise their legislative influence in favor of all aids being granted to the vast commerce of the north-west. Energetic personal effort has resulted in beneficial legislation for the lakes and there is lots more of the same vitality among influential and prominent lake vessel owners, so that there is no longer, or ought not to be, any need of "beating around the bush" to secure federal recognition of the aids to navigation now required, or to point out that the tonnage of the lakes is the backbone of the United States mercantile marine and asks for only what it is justly entitled to at the hands of those who are temporarily entrusted to preside over and deliberate upon the legislation which will, or may, provide the greatest good to the greatest number. A liberal attention to the requirements of lake commerce immeasurably benefits a large population.

THE Suez Canal, an accomplished feat of engineering skill equaling the world's wonders, Ferdinand de Lesseps controlled the pocket-books of the French, and used them, too, but, alas, to what purpose. Other people's money was easily and illegally squandered. Now comes the day of retribution, for the characters of all who were in any way connected with the mammoth national plundering scheme is smirched, the French people were robbed of $300,000,000 and the Panama fiasco has at last exploded. The French Panama highway of maritime commerce is downed and cannot be resurrected. The American Nicaragua canal awaits the desire of the American people to be carried to a successful issue and all interests should join hands in carrying it through.

STEAMBOAT INSPECTION SERVICE.

The following recapitulation is taken from the annual report of the supervising inspector general of steamboats just issued.

Total number of vessels inspected	7 661
Total net tonnage of vessels inspected	1,546.3 5.29
Total number of officers licensed	36,529
Increase in number of vessels inspected over preceding year	247
Increase in tonnage of vessels inspected over preceding year	43 000.89
Increase in number of officers licensed over preceding year	1,404

The foregoing is for the fiscal year ended June 30, 1892.

COMMODORE GEORGE DEWEY, U. S. Navy, Chief of the Bureau of Equipment, in his annual report for 1892, states that $404,675.97 was expended abroad for the maintenance of cruising vessels from the appropriation equipment of vessels. There were purchased during the year 73,467 tons of coal, costing $550,451.35. $540,605.52 was expended for material and labor. The rope-walk and the equipment shops at the Boston Navy-yard have to a large extent supplied rope, chain, cables, anchors, galleys, etc., and the sail lofts at that station, and the New York, Norfolk, and Mare Island Navy-yards have been occupied the greater part of the time with sail and other canvas work. Estimates aggregating $1,555,305 for coal and equipments, including $555,305 for the outfit of the new armoured cruiser No. 3 are submitted.

OBITUARY OF A PIONEER LAKE NAVIGATOR.

CAPT. A. W. ROSMAN.

Captain A. W. Rosman, one of Chicago's oldest residents, died of heart disease at his home, 869 Sawyer Avenue, on Saturday morning, November 26th. For over fifty years Capt. Rossman had followed the lake traffic with remarkable success as a commander. In the days of the old Northern Transportation Co. he was its fleet commander for twenty years, and later had for many seasons commanded vessels belonging to the Goodrich Transportation Co., plying between Chicago, Grand Haven and Muskegon. Five weeks before his death he became very ill, but insisted upon running his steamship, the Atlanta, into Grand Haven, though he required the support of two of his men while standing on the bridge giving his last orders.

The funeral services of Capt. Rosman were held at his residence on Monday, November 28th, at two o'clock. Numbers of beautiful floral offerings were sent by his former business associates, and many white haired sailors were present to honor his memory. Dr. H. W. Thomas delivered an eloquent funeral oration in which he touchingly referred to Capt. Rosman's quiet, useful life and the devotion to his calling which enabled one to say of him that in over half a century of command he had never lost a craft. The Linden male quartette rendered "Rocked in the Cradle of the Deep" and the hymn "Lead, Kindly Light," and after the prayer and benediction by Dr. Thomas, the remains were conveyed to Rosehill cemetery, where they were interred in the family lot. The pall-bearers were Col. S. N. Randolph, John Singleton, W. S. Canwright, Dr. G. H. Bassett, Cuthbert McArthur and Andrew Pearson. Capt. Rosman leaves a wife and daughter, Mrs. Frank Hamilton, of Traverse City, Mich. The following is a list of the vessels he sailed: 1838 and 1839, schooner Jacob A. Barker; 1840, schooner Indiana; 1841, schooner Nic Biddle: 1842 and 1843, schooner John F. Porter; 1844 and 1845, brig Illinois; 1846 and 1847, brig Europe; 1848, steamer Chautauqua; 1849, steamer General Wayne; 1850, steamer Great Western; 1851 to 1857, propeller Lady of the Lake; 1857 to 1863, propeller Buckeye; 1863 and 1864, propeller Maine; 1866, propeller Brooklyn; 1867, propellers Young America and Oswegatchie; 1872 and 1873, propeller City of Toledo; 1880, schooner S. B. Pomeroy; 1882, steamer Corona; 1883 to 1891, propeller Menominee; 1891 and 1892, steamer Atlanta.

While seldom speaking of himself, Capt. Rosman had given some few incidents of his early life to those at his fireside. He said: "I came to the lakes when a boy on the Erie canal, as passenger on the Denmark from Lockport to Buffalo and shipped as cook on the Morning Star, a vessel of thirty tons. Was capsized, clung to the keel until the schooner Post Boy took us off; decided to be a sailor. In 1834 was on the Elisha Whittlesy, a topsail schooner. Capt. Blair carried apples, cider and fruit trees from Ashtabula to Detroit first trip in the spring, then lumber, and towed rafts of spars, etc., to what is now Port Huron. There were light-houses on Lake Erie, but none on the upper lakes, save on Thunder Bay Island, Bois Blanc and Rock Island. At Waugashonce Capt. Keith kept a light-ship where now stands a light-house, resting apparently on the water. Detroit was a small place and had not a paved street. All provisions came from the Canada side, brought over by fishermen. Their songs in the early morning were the signal of their coming.

The first ferry boat across the Detroit river was the Argo, two logs squared for her bottom. The St. Clair flats were entirely unimproved, and there was hardly nine feet of water, we used to go around the north channel; the course was staked out, but no attempt was made to go over at night. In 1835 shipped on the schooner Maringo, to run between Detroit and Chicago, Capt. Dingley. Capt. Steve B. Grummond was one of us. He has since been mayor of Detroit and is a shipowner in that city, the first land we made on Lake Michigan was where Waukegan now stands. Captain sent me to the foremast head to keep a sharp lookout for the "block house" (old Fort Dearborn), of Chicago. We came to an anchor at the mouth of the creek; there was no harbor and we went ashore in a small boat. Later that year the government dredging enabled vessels drawing four feet of water to get in. There were a few small houses near where Rush Street bridge is now. The fort and John Kinzie's residence were the most prominent buildings. There was a small grocery at the forks of the river and a little place containing general merchandise; no pavements, no bridge, only two floats, one on the main river, the other on the south branch. Even in 1854 there were ferries at State and Rush streets, and in 1842 Mark Beaubien owned a ferry. Mails were brought from Milwaukee by stage, taking ten days to two weeks. Passengers came from Buffalo by stage and I paid seventy-five cents to send a letter containing ten dollars back to that city. We carried provisions of all sorts, and families and their household goods moving west we loaded and discharged by means of a scow. Lard and pork that came up the Illinois river was brought to Chicago in wagons and we took it to Buffalo. St. Joseph was much larger than Chicago. Grand Haven was the only harbor on the lake. There was a warehouse and several small buildings there. No Muskegon, no Manistee, no Ludington. The timber line was unbroken. We touched at Pike's creek, now Kenosha, Root river, now Racine, and Nanarina, now Green Bay, to land persons who were looking up places to settle. When we were sent ashore to get wood for the cook's fire, we were cautioned by the captain to gather drift wood from the beach, as wild animals would devour us should we enter the woods.

At Mackinaw the fort was occupied by American soldiers, the fur company was at its best and its warehouses filled with wealth. Will Brewster was agent and lived at Detroit; the old Mission was inhabited mostly by Indians; Senator Ferry was interested in the work that year. Here was where the Indians received their payments from the government and many thousands came from all quarters, even from the Missouri, they were given blankets, arms and cash, the latter we brought up on the "Maringo," half dollars packed in boxes like axes. Traders flocked from all points to sell to the Indians, so in the end they went away as poor as they came, save a few trinkets. Captain Dingley died that fall and I went into the Marshal Ney with Captain Humphrey. At Buffalo, late in November, we had a heavy gale; the flats were submerged, we left for Detroit, got a south-wester, ran under Erie Peninsula with ten other vessels; wind came from north-east, we ran out; we knew nothing of the north passage, were running under double reefed foresail; it was snowing hard;

CAPT. A. W. ROSMAN.

we made a light at 4 a. m, put the two reefed mainsail and the bonnet off the jib, hauled her head to the light which turned out to be Point au Pelee Island light, instead of Marblehead light. By this mistake we reached Detroit safely; the other vessels froze in the ice at the head of Lake Erie. The Austerlitz went ashore off Sleeping Bear Point; the crew attempted to walk to Grand Haven on the beach, several died and were buried in the snow, the others reached Grand Rapids and went by stage to Detroit. David Ewing was mate and pilot. The next spring we visited the wreck, got out a barrel of flour which had been under the water all winter. Not five pounds were damaged.

When on the schooner Indiana in 1840, Col. R. M. Hough, the builder of the Union stock yards at Chicago, and the first president of the Chicago & Pacific railroad, sailed with me before the mast all summer.

Spring of 1844 I took the brig Illinois. She was a big vessel for those days, carried studding sails alow and aloft, a top gallant studding sail, had two mates, six sailors, cook and cabin boy, and carried 7,000 bushels of wheat.

Spring of 1851 went into the propeller Lady of the Lake at Ogdensburg, N. Y., my Clerk Z. M. Hall went to Boston to solicit freight and advertise the new line. He secured some business and all freight was carried by the Lady of the Lake. Dean Richmond, John P. Chopin and myself were her owners. Later they sold out to Chamberlain and Crawford who later added a score of boats as increase of business demanded, and thus was formed the Northern Transportation Company, whose propellers ran between Ogdensburg and Chicago for over twenty years."

TWO NEW YACHTS.

The Davis Boat & Oar Co., of Detroit, have closed contracts to build two steam yachts this winter at their works at Wyandotte, one for George S. Davis, of Parke, Davis & Co., and another one for Michael Cudahy, the millionaire pork and beef packer of Chicago. The Davis yacht, upon which work has already been commenced, will be 108 feet over all, 90 feet on the water line and 17 foot beam. She will be fitted with a Robinson water-tube boiler and a compound engine. Her cabins are to be finished in a rich style, and she will compare favorably at every point with other fast steam yachts. The cost of this yacht will be $21,000.

The Cudahy yacht, for which the contract was but recently closed, will be one of the finest pleasure crafts afloat on fresh water. Her cost will be $40,000. She will be 118 feet long and 17 feet beam, with a Robinson water-tube boiler and a triple expansion engine. The finishing of the cabins is to be in mahogany, and the fittings and furnishings throughout will be on a most elaborate scale. The yacht will not only be rich in style and finish, but very fast, and superior to anything now at Chicago. Both yachts will be completed early next season.

FOR THE ADOPTION OF A LAKE CLASSIFICATION SOCIETY.

The meeting of the general marine insurance agents, owners and builders, held in Detroit, last Saturday, to deliberate on the adoption of a new system of survey and classification for iron and steel steamers, etc., resulted in the formation of a representative committee of underwriters' agents who will report at a future meeting rules of classification that are expected to suit all interests.

Shipbuilders were in attendance, with the notable exception of the Globe Iron Works Co., though owners were sparsely represented, the president of the Lake Carriers' Association considering that it was not within his province to appoint a committee to represent the association at the conference, so that it was essentially an underwriters' meeting.

Mr. E. Platt Stratton, chief engineer of the American Shipmasters' Association, of New York, sought the adoption of "The Record of American and Foreign Shipping," and Capt. Herriman, chief of the lake marine department of the Bureau Veritas, desired to introduce their rules, but no decided action was taken. The new system drawn up by Mr. Joseph R. Oldham, at the request of influential builders, owners and managing owners, was not dwelt upon, though likely something more will be heard of this departure at, if not before, the annual meeting of the Lake Carriers' Association, which takes place early next month. The committee appointed by the underwriters to reach a basis of agreement are Messrs. Sandrock, of Buffalo, Stone, of Detroit, and David Vance, of Milwaukee.

AN IMPORTANT MINING TRANSFER.

The Schlesinger brothers of Milwaukee have bought the Aragon mine at Norway, Mich., from the Aragon Mining company, represented by Angus Smith, for $1,000,000. The formal transfer will take place in a few days. A small portion of the purchase price will be paid in cash and the remainder will come out of the product of the mine.

It is the largest mine discovered in the Menominee district in ten years or more. The mine worked out 166,000 tons of ore this year and about 200,000 last year, and now produces three grades of ore, all of a superior quality.

TO PROTECT HOUSE FLAGS.

At the request of the leading yacht clubs and also on behalf of the principal steamship companies a bill will be presented to Congress, providing for the registry of yachting and shipping flags or symbols in the Bureau of Navigation of the Treasury Department, on payment of a fee of $2 and imposing a penalty of imprisonment for not more than one year or a fine not exceeding $1,000 upon any one who uses or imitates the house flag or what is known on the Lakes as the private signal of another without right.

A SPECIAL contract does not take away the character of a common carrier, such as a railroad, steamship, or express company, for, notwithstanding the express stipulations of such a contract, certain obligations imposed by public policy remain. One of these is to carry safely so far as care and diligence will enable the carrier to do so. The common law has indeed been relaxed so as to permit a common carrier to limit his liability, but this change in the law does not go to the extent of allowing a carrier to contract for a complete exemption from liability, nor does it go to the extent of changing the rule that, when the failure to carry is affirmatively shown, the burden of showing exemption from the duties and obligations imposed by law rests upon the carrier. The rule that the presumption is against the carrier in cases where he has full charge and custody of the property is in harmony with the doctrines sustained by a long line of cases, a line beginning far back in the early days of common law, and continuing unbroken to the present.

CORRESPONDENCE.

☞We do not hold ourselves responsible in any way for the views or opinions expressed by our correspondents. It is our desire that all sides of any question affecting the interests or welfare of the lake marine should be fairly represented in THE MARINE RECORD.

GIVING CREDIT WHERE CREDIT IS DUE—WRECKERS AND LIFE-SAVERS.

To The Marine Record:

FRANKFORT, MICH., Dec. 14, 1892.

I desire to publicly express my thanks through the columns of THE MARINE RECORD for the able and cheerful assistance rendered the Ann Arbor No. 1 during her recent stranding at Ahnapee. I cannot find words to express myself too strongly in praise of Capt. M. Swain, manager of the Swain Wrecking Co., and his powerful wrecking tug Favorite. He worked advisedly and like a Trojan to release the stranded steamer. In less than twenty hours after the Ann Arbor was run ashore the Favorite and Seagull reached Ahnapee from Cheboygan. No time was lost in getting to work, and I can endorse the most favorable reports ever given these well known wreckers for prompt and faithful assistance to a stranded vessel. I notice it has been generally reported that Capt. Reid, of the tug Seagull, parted a 19-inch manilla hawser five times. The fact is that she parted a 14-inch hawser twice, but I am quite satisfied that she could part any rope ever laid if given an opportunity and her owner is full of the vim and energy so essential in the successful management of a salvage, wrecking and towing business. The tug Welcome, from Milwaukee, and the Leatham & Smith, from Sturgeon Bay, the Goldsmith and other tugs also rendered valuable assistance.

In giving credit where credit is due, in so far as my recent experience may warrant me in so doing, I desire especially to mention the services of the Sturgeon Bay Canal life saving crew. THE RECORD has always a faithful report of brave acts of the life savers and in this connection I am pleased to voice the general verdict of their usefulness, for, after reaching shore my first move was to call on the life saving station for assistance, to which they promptly responded and remained by me from Tuesday afternoon until noon on Thursday, running lines from the stranded steamer to the tugs and in every way rendering assistance by working like beavers night and day, without a word of complaint or murmuring until the rescue had been effected. In tendering my sincere thanks to the keeper and crew of the Sturgeon Bay Canal Life Saving Station, I also wish to convey the thanks of the owners and crew of the Ann Arbor No. 1 for the cheerful and skillful services rendered while the vessel was in jeopardy and trust that due notice of the noble work performed by these hardy "watchmen of the coast" will be duly appreciated by their superiors in office. Yours truly,

EDWARD KELLEY,
Master steamer Ann Arbor No. 1.

MARITIME LAW.

RIGHT OF BROKERS TO COMMISSION.

Where a broker brings an intending purchaser of a vessel and a shipbuilder together, and as a result of such meeting a contract for the construction of a vessel is made, the mere fact that the shipbuilder was required to enter into the competition with other builders before the contract was awarded to him does not deprive the broker of his right to commission. Holmes vs. Neafie, Supreme Court of Pennsylvania, 24 At. Rep., 1,096.

MARINE INSURANCE—FIRE—RIDER—CONSTRUCTION—EXCEPTION OF PARTICULAR TRIP.

District Court, S. D. New York. July 28, 1892.

An insurance policy insured a vessel against fire on "all inland waters as far south as Norfolk, Va." Afterwards a rider was attached to the policy, giving permission to the tug to go as far south as Charleston, "but not to cover on trips either way between Norfolk and Charleston." On her way from Norfolk to Charleston, and while north of Norfolk, the tug caught fire and was burned. Held that, being at the time on a trip between Norfolk and Charleston, the wording of the rider prevented any recovery on the policy, even if the loss occurred on "inland waters." Fed. Rep., vol. 52, p. 170.

DEMURRAGE—LAY DAYS—DROUGHT—CONSTRUCTION OF CHARTER.

Circuit Court of Appeals, Fifth Circuit. June 20, 1892.

Where a ship is chartered in Liverpool to carry a cargo of lumber from Ship Island, and the charter party provides that "in the computation of days allowed for delivery should be excluded any time lost by reason of droughts, floods and storms, or any other extraordinary occurrence, beyond the control of the charterer," such exception does not apply to a drought existing at the time of the charter in the region of the Pascagoula river, and which prevented the charterer from obtaining the timber, but which did not interfere with its delivery from Moss point, the usual place of preparing cargoes, and between which place and Ship Island no drought could affect the delivery. 48 Fed. Rep. 117, reversed.

SAME—STORMS.

Under the terms of the charter, demurrage was to be paid for each "working day beyond the days allowed for loading." Held, that time lost by reason of storms before the beginning of the lay days, or after their expiration, could not be deducted in computing the demurrage.

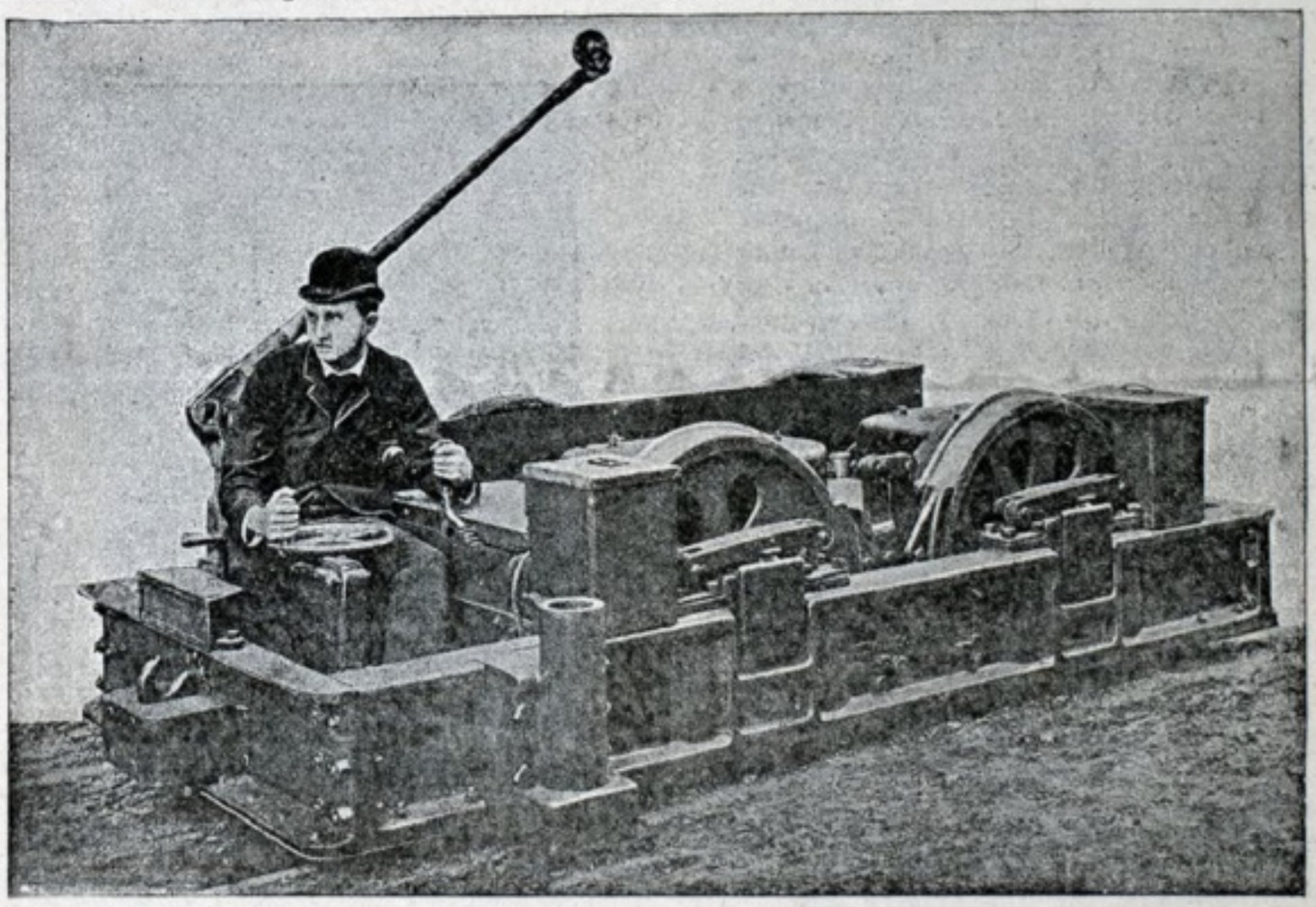
SAME—"WORKING DAYS" DEFINED.

The term "working days" in maritime affairs means a calendar day on which the law permits work to be done. It excludes Sundays and legal holidays, but not stormy days. Fed. Rep., vol. 52, pg. 163.

ADVANCE IN ELECTRICAL MECHANISM.

(Illustrated.)

We illustrated and described recently a new mining locomotive constructed by the General Electric Company—the C. L. M. type. We now show a new mining locomotive also designed by them to meet the growing demand for small substantial low priced machines of this character. It will be known to the trade as the T. M. M. type and consists principally of two standard railway motors, mounted upon a heavy iron truck frame. The truck frame is built of cast iron side frames, bolted to heavy steel channel beams, which are securely fastened together by a wrought iron angle plate. The axle bearing boxes are small and solid in construction, easy of access for oiling and replacing the brass linings. The frame of the locomotive is hung from the axle boxes by means of steel springs, so that there is little pounding upon the track. By this method of construction it is possible to take the moters, together with the wheels and axles, entirely out of the frame. The motors used are of the standard railway type, either the W. P. 30 or W. P. 50, as required. For gauges narrower than three feet special four pole motors have been designed, which will run on gauges as narrow as eighteen inches. The controling mechanism used is the standard series parallel controller. The break is a powerful form of steel screw and lever. No adjustment is necessary for the wear of the brakes used, as the steel screw takes up the lost motion until the shoes are worn out. The trolley is of the single arm insulated type, and may be moved from one side to the other of the machine, as occasion may require. As the motors are self-protected, no cover for the locomotive is considered necessary, but one can be easily supplied. The cover increases the total height of the machine four inches. Sand boxes are provided for both front and rear wheels. All of the controlling levers are placed on the platform of the machine, within easy reach of the operator.



COALING SHIPS AT SEA.

The U. S. Navy Department has decided to have a practical test of a device for the coaling of vessels at sea, suggested by Philip B. Low, of Brooklyn, N. Y. It consists of a wire hawser attached to the mast-head of a collier and then connected to a point near the stern of a man-of-war which is to be coaled. The coal on the collier is to be placed in canvas bags, hoisted by means of a pulley to the wire hawser stretched from the top of the mast and then pulled along the wire to the man-of-war by a counterpoise attached to the wire hawser on the collier. The line between the two vessels will, it is supposed, be kept taut at all times, even when both vessels are rolling.

Captain James O'Brien, late master of the whaleback steamer C. W. Wetmore, on the Pacific coast, was fatally injured a few days ago in a street car accident in Tacoma, Wash.

NOTES.

THE Ann Arbor No. 2, built by the Craig Ship Building Co., Toledo, O., is given a gross tonnage of 1,144.91 and a net tonnage of 572.46. This steamer and a tug boat of 23 tons named the Mollie L. are the only new lake vessels to which the commissioner of navigation awarded official numbers during the week ending December 10th.

Mr. Chas. W. Whitney, 81 and 83 Fulton street, New York City, the United States agent for Serve's patent ribbed steel boiler tubes and Purves' patent ribbed steel furnace flues, writes as follows: "It may interest you to know that both our ribbed tubes and Purves' furnace flues are to be fitted in all the new steamers now building or to be built for the Inman Line. We have orders for the two cargo boats now being built on the Clyde, and are promised the orders for the steamers to be built by the Cramps for this line. The Inman Co. has been experimenting with our tubes and furnace flues in actual ocean service for the past 18 months, and has found neither wanting in any respect."

BUSINESS is exceptionally good with Chas. P. Willard & Co., Chicago. They have contracts for complete boats and for marine machinery, for delivery between now and Spring, that will keep them very busy. Among others, a dispatch boat for the Government, for use at Galveston, Texas; a 40-foot yacht for the Hon. Harvey Myers, Covington, Ky.; a 60-foot light draft river steamer for the United States of Columbia, S. A.; a 50-foot light draught river steamer for Costa Rica, C. A.; two 65-foot steam yachts for lake use, and a number of others; in all 23 complete boats under way, the smallest being 36 feet in length. With one or two exceptions all are fitted with fore and aft compound, or triple expansion engines.

PROPOSALS.

U. S. ENGINEER OFFICE, HICKOX Building, 185 Euclid avenue, Cleveland, Ohio, November 22nd, 1892. Sealed proposals for extending East and West Piers at Fairport Harbor, Ohio, will be received at this office until 2 p. m. of Thursday, December 22nd, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. JARED A. SMITH, Corps of Engineers, U. S. A. 1-15

U. S. ENGINEER OFFICE, HICKOX Building, 185 Euclid Avenue, Cleveland, Ohio, December 12, 1892. Sealed proposals for dredging in straight channel at Sandusky Harbor, Ohio, will be received at this office until 2 o'clock p. m., standard time, of Friday, December 30, 1892, and then publicly opened. Specifications, blank forms and all available information will be furnished on application to this office. JARED A. SMITH, Corps of Engineers, U. S. A. 15-29.

UNITED STATES ENGINEER OFFICE, Detroit, Mich., December 13, 1892.—Sealed proposals for furnishing all labor, materials and appliances, and constructing the floors, etc., of the 800 foot lock at St. Mary's Falls Canal. Mich., will be received at this office until 2 p. m. standard time, January, 12, 1893, and then publicly opened. Specifications, blank forms, and all available information will be furnished on application to this office. O. M. POE, Colonel, Corps of Engineers, Bvt. Brig. Gen., U. S. A. 15-5